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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ENIN-OKUT, EDU E

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,844	Applicant(s) OHMURA ET AL.	
	Examiner Edu E. Enin-Okut	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-17, 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

SURFACE TREATED STEEL SHEET FOR BATTERY CASE,
BATTERY CASE AND BATTERY USING THE CASE

Detailed Action

1. The amendment filed November 24, 2008 was received. Applicant has amended claims 18-20 and cancelled claims 1-17, 21 and 22. Currently, claims 18-20 are pending.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. The rejection of claim 7 under 35 U.S.C. 102(b) as being anticipated by Du Rose (US 3,355,267) is withdrawn because claim 7 was cancelled.

Claim Rejections - 35 USC § 103

4. The rejections of claims 10, 11, 17-19 and 20 under 35 U.S.C. 103(a) as being unpatentable over Hirofumi et al. (US 5,576,113) in view of Du Rose and Ohmura et al. (US 5,993,994) are withdrawn because claims 10, 11 and 17 was cancelled and claims 18-20 were amended.

5. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirofumi et al. (US 5,576,113) in view of Du Rose (US 3,355,267).

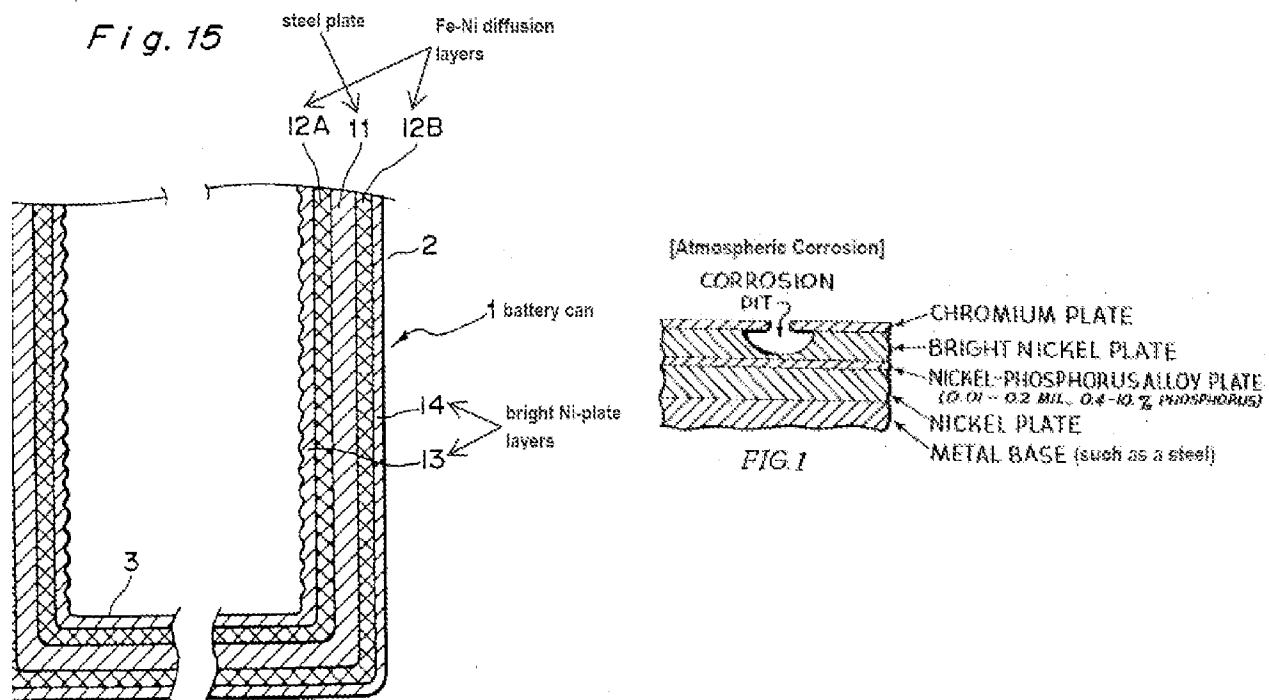
Regarding claims 18 and 19, Hirofumi teaches a steel plate 11, processed into a battery can 1, that serves as a substrate for Fe-Ni diffusion layers 12A,12B disposed on both sides of the plate and bright Ni-plated layers 13,14 disposed on the outer side of each Fe-Ni diffusion layer (Abstract; 7:29-55; Figs. 15, 24; see the labeled figures below). However, Hirofumi does not teach the use of a nickel-cobalt-phosphorus alloy as an upper layer.

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Du Rose teaches a triple-layer system to protect a corrodable substrate from atmospheric attack composed of a first nickel layer formed on the substrate surface (such as steel), depositing a second layer of a nickel alloy containing cobalt and phosphorous, and depositing a bright nickel layer atop the nickel alloy (1:12-28, 1:35-50, 2:3-6, 5:1-6; Figs. 1-3; see the labeled figures below).

It would have been obvious to form a nickel layer as an intermediate layer and a nickel-cobalt-phosphorous alloy as an upper layer on the inner side of the metal of the battery case of Hirofumi in the manner taught by Du Rose because Du Rose teaches that these layers participate in protecting a steel substrate from atmospheric corrosion.

Labeled figures from Hirofumi and Du Rose, respectively:



6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Du Rose.

Regarding claim 20, as to a surface treated steel sheet for a battery case (emphasis added), if the body of the claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct

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definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999); *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997). See MPEP 5 2 1 1.02 (11).

Du Rose teaches a surface treated steel sheet in which a diffusion layer of a nickel-cobalt-phosphorus alloy is formed at the surface and having a cobalt content of 0-25% by weight and a phosphorus content of 0.4-10% by weight (1:12-17, 1:45-52, 5:1-6).

Du Rose does not expressly teaches the claimed ranges of the weight of cobalt and phosphorous in the alloy layer. However, it has been held that obviousness exists where the claimed ranges overlap or lie inside ranges disclosed by the prior art. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2144.05 (I).

Response to Arguments

7. Applicant's arguments filed November 24, 2008 have been fully considered but they are not persuasive.

8. As to Applicant's arguments with respect to the Hirofumi et al. and Du Rose references individually (see p. 5-6 of Applicant's remarks), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

9. As to Applicant's argument that "... Du Rose, the secondary reference, does not disclose a nickel-cobalt-phosphorus layer as an upper layer, ..." (see p. 6 of its remarks), the Du Rose references teaches the use of a nickel triple-layer plate, including a nickel alloy containing cobalt and phosphorus, placed upon the surface of a corrodible metal substrate to protect that substrate from atmospheric

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corrosion (see Du Rose, 1:12-28, 1:35-50, 2:3-6, 5:1-6 and the rejection of amended claims 18 and 19 above). One would appreciate that the nickel alloy layer containing cobalt and phosphorus is an “upper layer” because the purpose of that layer is to protect its substrate from the atmosphere (i.e., the “outside”). Thus, applicant’s argument is not persuasive.

10. As to Applicant’s argument that:

“... The nickel-cobalt-phosphorus alloy layer has a tendency to suffer cracking when the steel sheet, upon which such coating is applied, is then shaped into a battery case. However these small cracks which appear on the layer on the inner side of the battery case are advantageous, in that they improve the contact area with electrolysis solutions, active substances etc., thus providing a layer which seemingly has the disadvantage of cracking which actually turns out to be an unobvious improvement.” (see p. 5 of its remarks); and,

“... as pointed out above, it could not have been predicted or foreseen that a seeming disadvantage (small cracks), would turn out to be an advantage, ...” (see p. 6 of its remarks)

It should be noted that, if a prima facie case of obviousness is established, the burden shifts to the applicant to come forward with arguments and/or evidence to rebut the prima facie case. See, e.g., *In re Dillon*, 919 F.2d 688, 692, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990). Rebuttal evidence may also include evidence that the claimed invention yields unexpectedly improved properties or properties not present in the prior art. A showing of unexpected results must be based on evidence, not argument or speculation. *In re Mayne*, 104 F.3d 1339, 1343-44, 41 USPQ2d 1451, 1455-56 (Fed. Cir. 1997). See MPEP 2145. Further, arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). See MPEP 716.01(c)(II), 2145.

Applicant provides no evidence to support the above-argued advantage nor is there any description or evidence of this advantage in its instant specification. So, Applicant’s arguments with respect to this advantage is not properly supported and thus, unpersuasive.

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Further, the mere recognition of latent properties in the prior art (as taught by the battery case of Hirofumi et al., as modified by Du Rose) does not render non-obvious an otherwise known invention. *In re Wiseman*, 596 F.2d 1019, 201 USPQ 658 (CCPA 1979). “The fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious.” *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact / Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Edu E. Enin-Okut** whose telephone number is **571-270-3075**. The examiner can normally be reached on Monday - Thursday, 7 a.m. - 3 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edu E. Enin-Okut/
Examiner, Art Unit 1795

/Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1795